U.S. Department
of Transportation

400 Seventh Street, S.W.
Washington, D.C. 20590

**Pipeline and
Hazardous Materials
Safety Administration**

APPROVAL CA2001120001
(THIRD REVISION)
ISSUED BY THE COMPETENT AUTHORITY OF THE UNITED STATES
EXPIRATION DATE: JULY 31, 2007

1. **APPROVAL HOLDER**: **The Department of the Army**
Military Surface Deployment and
Distribution Command (SDDC)
661 Sheppard Place
Fort Eustis, VA 23604-1644

2. **REGULATORY AUTHORITY**: Packing Instruction 200 of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI).

3. **SYNOPSIS**: This approval authorizes the transportation of the Submarine High Data Rate (HDR)/ Advanced Communications Mast (ACM) configured with a non-DOT specification pressure vessel containing anhydrous ammonia.

4. **BASIS**: This approval is issued in response to the Department of the Army's application dated July 11, 2005 and additional information dated July 25, 2005.

5. **PERIOD OF VALIDITY AND CONDITIONS OF APPROVAL**: This approval does not provide relief from any requirements of the Hazardous Materials Regulations or the ICAO TI except as stated herein. This approval is valid until the posted expiration date above or unless terminated by the Associate Administrator for Hazardous Materials Safety.

a. Approved Material(s):

Proper shipping name, Hazard class or division, and Identification number: Ammonia, anhydrous, 2.3, UN1005.

b. Packaging: The HDR/ACM mast is configured with an integral cooling system consisting of metallic heat pipes containing reagent grade anhydrous ammonia as the working fluid. The cooling system contains a total quantity of 120 grams of anhydrous ammonia at a working pressure of 667

psia. The mast is packaged for shipment using either a wooden box conforming to Drawing(37895) 995653 or a reusable plastic/aluminum shipping container conforming to drawing (49956) H279020, submitted with the application.

c. For both ACM and HDR, anhydrous ammonia is encased in Swales Thermal Systems heat pipes. The heat pipes are mounted inside a two-piece coldplate assembly. The coldplate assembly is mounted inside titanium housing. There are two different heat pipes in the coldplate assembly. The physical construction of the heat pipes for the two systems is identical. The amount of anhydrous ammonia in each assembly is 136.4 grams. The ACM and HDR design must conform to drawings H328877-1 and G745289-1, submitted with the application.

6. **SPECIAL PROVISIONS**:

a. A copy of this approval must accompany the shipment made under the terms of this approval.

b. This approval in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of the countries of transit and destination.

c. Transportation must be by cargo aircraft only.

7. **GENERAL PROVISIONS**:

a. Failure by any person to comply with the terms and conditions of this approval and the Hazardous Materials Regulations, 49 CFR Parts 171-180 or the ICAO TI may result in the modification, suspension or termination of that person's authority to use this approval. Failure to comply may also subject that person to penalties prescribed by 49 U.S.C. §§ 5123 and 5124. This approval may be modified, suspended or terminated in its entirety if that action is justified in light of changes in circumstances or additional information not available when this approval was issued. Unless immediate modification, suspension or termination is necessary to avoid a risk of significant harm to persons or property, before action is taken, that person will be notified and provided with an opportunity to show why the proposed action should not be taken.

b. Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this approval must be provided training on the requirements and conditions of this approval in addition to the training required by §§ 172.700 through 172.704.

c. Any person operating under the terms of this approval must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

Issued in Washington, D.C.

Dated: **July 27, 2005**

Approved by:

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-32.